

7. REVIEW OF PROCESS CHANGES POTENTIALLY SUBJECT TO PERMIT TO CONSTRUCT RULES

This section reviews the process changes identified in Section 4 as potentially subject to PTC rules. To determine if these changes are subject to PTC requirements, each change is compared with the PTC exemption criteria. If the change does not qualify for an exemption, a PTC is required for the change.

A PTC exemption can be either a Category I exemption or Category II exemption, based on IDAPA 58.01.01, Sections 221 and 222, respectively. Process changes qualifying for a Category II exemption were previously identified in Section 4 and are not considered further in this section.

To qualify for a Category I exemption, a source must meet each of three criteria (IDAPA 58.01.01.221):

- a. **Below Regulatory Concern (BRC).** The maximum capacity to emit of a source must be less than 10 percent of the “Significant Emission Increase” levels identified in the definition of “significant in IDAPA 58.01.01.006. Table 7-1 summarizes these criteria, and compares those criteria with emissions associated with natural gas combustion. As indicated, for sources that have emissions solely due to natural gas combustion, the gas combustion rate must be less than or equal to 8.8 MMBtu/hr for the source to qualify for a Level I exemption. At combustion rates exceeding 8.8 MMBtu/hr, emissions of carbon monoxide and mercury will exceed the Level I exemption criteria.
- b. **Radionuclides.** Radionuclide emissions must be less than certain specified levels. Because there are no identified sources of radionuclide emissions at the Rexburg Facility, this criterion is not relevant.
- c. **Toxic Air Pollutants.** The change must qualify for one of the TAP exemption criteria listed in IDAPA 58.01.01.223. Because natural gas combustion is the only source of TAP emissions in any of the process changes to be reviewed, the TAP review can be simplified by focusing on the particular TAPs from natural gas combustion that have the most stringent permitting conditions.
 - o *BRC Exemption.* Table 7-2 compares TAP emissions associated with natural gas combustion with the TAP Screening Emission Levels of IDAPA 58.01.01. 58.01.01.585 and 586. As Table 7-2 indicates, at 0.343 MMBtu/hr, all TAP emissions are less than or equal to 10 percent of the associated Screening Emission Levels, with cadmium at exactly 10 percent of the Screening Emission Level. Accordingly, processes that combust less than 0.343 MMBtu/hr natural gas will qualify for a Below Regulatory Concern (BRC) TAP Exemption, as provided in IDAPA 58.01.01.223.01.

- *Level I Exemption – TAP Emissions Below Screening Emissions Levels.* As Table 7-2 indicates, TAP emissions associated with natural gas combustion not exceeding 3.43 MMBtu/hr natural gas will be less than all TAP Screening Emissions Levels. Accordingly, processes that combust less than 0.343 MMBtu/hr natural gas will qualify for a Level I TAP exemption per IDAPA 58.01.01.223.02a.
- *Level I Exemption – TAP Emissions Exceeding Screening Emissions Levels.* If a source's combustion rates exceeds 3.43 MMBtu/hr, to qualify for a Level I TAP exemption the predicted ambient concentrations of all TAPs must be less than the Acceptable Ambient Concentration (AAC) for those Taps listed in IDAPA 58.01.01.785 and 786. Table 7-3 shows AACs for each TAP identified as associated with natural gas combustion. Table 7-3 also shows the ratio of each AAC and the emission factor for that TAP. Because predicted impacts are directly proportional to emission rate, if the projected impact is less than the AAC for the TAP that has the lowest ratio between AAC and emission factor, projected impacts for all TAPs will be less than the associated AAC. As indicated in Table 7-2, the "worst case" TAPs are hexane and cadmium, for 24-hour and annual averaging periods, respectively.

These considerations are summarized below:

Burner Capacity	Category I Exemption Eligibility	
	BRC Status	TAP Exemptions Status
≤ 0.34 MMBtu/hr	Eligible	Qualifies for BRC Exemption
≤ 3.43 MMBtu/hr	Eligible	Qualifies for Level I Exemption
≤ 8.8 MMBtu/hr	Eligible	Qualifies for Level II Exemption if ambient concentrations are less than AAC
> 8.8 MMBtu/hr	Not Eligible	NA

PERMIT TO CONSTRUCT APPLICABILITY REVIEW FOR SPACE HEATERS

Section 4 identified two space heaters potentially subject to Permit to Construct requirements and that have burner capacities between 3.43 and 8.8 MMBtu/hr. Hence, these units require impact analysis to demonstrate that they qualify for a Level I Exemption. Table 6-3 presented the results of cadmium and nitrous oxide impact analyses for all space heaters at the Rexburg Facility as a single aggregate source.

Table 6-3 shows that impacts from all space heaters combined do not exceed the AAC for either cadmium or nitrous oxide. Therefore, impacts from any individual space heater must also be less than the AAC. Accordingly, the following space heaters, which were previously

identified as requiring significant impact analysis to qualify for a Category I Permit to Construct exemption and a Level I TAP exemption, are exempt from Permit to Construct requirements:

Heater Identification	Capacity, MMBtu/hr	Date Installed or Modified
REYCO – Shop roof	8.8	1997
REYCO – Proctor Roof	8.8	1997

Because no space heaters exceed 8.8 MMBtu/hr capacity, none of them require a PTC. BAF requests that all space heaters be aggregated under a single Category I exemption determination for purposes of reporting under IDAPA 58.01.01.223.05.

PERMIT TO CONSTRUCT APPLICABILITY REVIEW FOR PROCESS CHANGES

Table 7-4 presents the applicability of the Category I PTC requirements to each of the process changes potentially subject to PTC rules, as identified in Section 4. As indicated in Table 7-4, the following process changes do not qualify for a PTC exemption:

- Installation of process cooler and stack 7020 (1989).
- Replacement of dryer associated with stack 7019 (1994).
- Installation of dryer and stacks 613/614, 615/616, and 638
- Installation of dryers and stacks 5034 and 5037
- Installation of dryer and stack 4000
- Replacement of dryer and installation of stacks 228 and 234

BAF hereby applies for PTCs for these process changes as part of this Tier II Permit Application.

TABLE 7-1

COMPARISON OF SIGNIFICANT EMISSION INCREASE CRITERIA AND NATURAL GAS COMBUSTION RATES

	Constituent								
	CO	NOx	Pb	TSP	PM-10	SO2	VOC	Be	Hg
"Significant Increase" Emission Rate, as defined in IDAPA 58.01.01.005.92, ton/yr	100	40	0.6	25	15	40	40	0.0004	0.1
10% of Significant Increase Emission Rate, ton/yr	10	4	0.06	2.5	1.5	4	4	0.00004	0.01
Natural Gas Combustion Emission Factor, lb/MMBtu ³	0.26	0.061	4.90E-07	0.0075	0.0075	0.0024	0.0054	1.18E-08	2.60E-04
Natural Gas Firing Rate Corresponding to Emission Rate Equal to 10% of Significant Increase Emission Rate (based on 1020 Btu/scf), MMBtu/hr	8.8	15	28,000	76	46	381	169	776.	8.8

³ CO and NOx emission factors based on source emission measurements from other BAF stacks. All other emission factors based on AP-42.

TABLE 7-2
ESTIMATED TAP EMISSIONS ASSOCIATED WITH NATURAL GAS COMBUSTION AT 0.343 AND 3.43 MMBTU/HR

TAP	Screening Emission Level, lb/hr	Emission factor, lb/MMscf	Emissions at 0.343 MMBtu/hr Heat Rate		Emissions at 3.43 MMBtu/hr Heat Rate	
			Percentage of Screening Emission		Percentage of Screening Emission	
			Emission Rate, lb/hr	Level	Emission Rate, lb/hr	Level
Cadmium	3.70E-06	1.10E-03	3.70E-07	10.0%	3.70E-06	100.0%
Formaldehyde	5.10E-04	7.50E-02	2.52E-05	4.95%	2.52E-04	49.5%
Arsenic	1.50E-06	2.00E-04	6.73E-08	4.48%	6.73E-07	44.8%
Chromium(VI)	5.60E-07	7.00E-05	2.35E-08	4.20%	2.35E-07	42.0%
Nickel	2.70E-05	2.10E-03	7.06E-07	2.62%	7.06E-06	26.2%
PAHs (POM)	2.70E-06	1.14E-05	3.83E-09	0.14%	3.83E-08	1.42%
Benzene	8.00E-04	2.10E-03	7.06E-07	0.09%	7.06E-06	0.88%
Benzo(a)pyrene	2.70E-06	1.20E-06	4.04E-10	0.01%	4.04E-09	0.15%
Nitrous Oxide	6.00E+00	2.20E+00	7.40E-04	0.01%	7.40E-03	0.12%
Beryllium	2.80E-05	6.00E-06	2.02E-09	0.01%	2.02E-08	0.07%
Hexane	1.20E+01	1.8	6.05E-04	0.01%	6.05E-03	0.05%
Barium	3.30E-02	4.40E-03	1.48E-06	0.00%	1.48E-05	0.04%
Mercury	3.00E-03	2.60E-04	8.74E-08	0.00%	8.74E-07	0.03%
Copper	1.30E-02	8.50E-04	2.86E-07	0.00%	2.86E-06	0.02%
Zinc	6.67E-01	2.90E-02	9.75E-06	0.00%	9.75E-05	0.01%
Chromium(II,III)	3.30E-02	1.33E-03	4.47E-07	0.00%	4.47E-06	0.01%
Cobalt	3.30E-03	8.40E-05	2.82E-08	0.00%	2.82E-07	0.01%
Pentane	1.18E+02	2.6	8.74E-04	0.00%	8.74E-03	0.01%
Manganese	6.70E-02	3.80E-04	1.28E-07	0.00%	1.28E-06	0.00%
Molybdenum	3.33E-01	1.10E-03	3.70E-07	0.00%	3.70E-06	0.00%
Selenium	1.30E-02	2.40E-05	8.07E-09	0.00%	8.07E-08	0.00%
Naphthalene	3.33E+00	6.10E-04	2.05E-07	0.00%	2.05E-06	0.00%
Toluene	2.50E+01	3.40E-03	1.14E-06	0.00%	1.14E-05	0.00%

**TABLE 7-3
COMPARISON OF TAP ACCEPTABLE AMBIENT CONCENTRATIONS WITH
NATURAL GAS COMBUSTION EMISSION FACTORS**

TAP	Acceptable Ambient Concentration (AAC), $\mu\text{g}/\text{m}^3$	Averaging Period	AP-42 Emission Factor, lb/MMscf	Ratio - AAC/ Emission Factor
Benzene	0.12	annual	2.10E-03	57.14
Formaldehyde	0.077	annual	7.50E-02	1.03
Hexane	9000	24-hr	1.8	5,000
Naphthalene	2500	24-hr	6.10E-04	4,098,361
PAHs (POM)	0.0003	annual	1.14E-05	26.32
Pentane	88500	24-hr	2.6	34,038
Toluene	18750	24-hr	3.40E-03	5,514,706
Nitrous Oxide	4500	24-hr	2.20E+00	2,045*
Arsenic	0.00023	annual	2.00E-04	1.15
Barium	25	24-hr	4.40E-03	5,682
Beryllium	0.0042	annual	6.00E-06	700.00
Cadmium	0.00056	annual	1.10E-03	0.51**
Chromium(II,III)	25	24-hr	1.33E-03	18,797
Chromium(VI)	0.000083	annual	7.00E-05	1.19
Cobalt	2.5	24-hr	8.40E-05	29,762
Copper	50	24-hr	8.50E-04	58,824
Manganese	250	24-hr	3.80E-04	657,895
Mercury	5	24-hr	2.60E-04	19,231
Molybdenum	250	24-hr	1.10E-03	227,273
Nickel	0.0042	annual	2.10E-03	2.00
Selenium	10	24-hr	2.40E-05	416,667
Zinc	500	24-hr	2.90E-02	17,241

* Nitrous oxide has the lowest ratio of AAC to emission factor of any of the listed TAPs with a 24-hour averaging period.

** Cadmium has the lowest ratio of AAC to emission factor of any of the listed TAPs with an annual averaging period.

TABLE 7-4
APPLICABILITY OF PTC RULE EXEMPTIONS TO FACILITY PROCESS CHANGES

Process	Description of Process Change	Air Pollutant	Potential to Emit, ton/yr	10 percent of SER Level ⁴ , ton/yr	Meets Exemption Criterion?	TAP Compliance Status
Plant	Installation of 8.8 MMBtu/hr: REYCO – Shop roof heater	Carbon monoxide	10	10	Yes	Level I Exemption (IDAPA 58.01.01.223.02) - Projected air quality impacts are less than AAC.
		Nitrogen Oxides	2.35	4	Yes	
		Sulfur Dioxide	0.09	4	Yes	
		Particulate Matter	0.29	2.5	Yes	
		PM-10	0.29	1.5	Yes	
		Volatile Organic Compounds	0.21	4	Yes	
		Lead	1.89E-5	0.06	Yes	
		Beryllium	4.5E-7	0.00004	Yes	
		Mercury	0.010	0.01	Yes	

⁴ SER Level is the rate of emissions that is defined as “significant” in IDAPA 58.01.01.006.92.

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TABLE 7-4
APPLICABILITY OF PTC RULE EXEMPTIONS TO FACILITY PROCESS CHANGES

Process	Description of Process Change	Air Pollutant	Potential to Emit, ton/yr	10 percent of SER Level ⁴ , ton/yr	Meets Exemption Criterion?	TAP Compliance Status
Plant	Installation of 8.8 MMBtu/hr: REYCO – Proctor	Carbon monoxide	10	10	Yes	Level I Exemption (IDAPA 58.01.01.223.02) - Projected air quality impacts are less than AAC.
		Nitrogen Oxides	2.35	4	Yes	
		Sulfur Dioxide	0.09	4	Yes	
		Particulate Matter	0.29	2.5	Yes	
		PM-10	0.29	1.5	Yes	
		Volatile Organic Compounds	0.21	4	Yes	
		Lead	1.89E-5	0.06	Yes	
		Beryllium	4.5E-7	0.00004	Yes	
		Mercury	0.010	0.01	Yes	
A	Installation of process cooler and stack 7020	Carbon monoxide	0	10	Yes	Not Applicable – no TAP Emissions
		Nitrogen Oxides	0	4	Yes	
		Sulfur Dioxide	0	4	Yes	
		Particulate Matter	3.1	2.5	No	
		PM-10	1.8	1.5	No	
		Volatile Organic Compounds	0	4	Yes	
		Lead	0	0.06	Yes	
		Beryllium	0	0.00004	Yes	
		Mercury	0	0.01	Yes	

TABLE 7-4
APPLICABILITY OF PTC RULE EXEMPTIONS TO FACILITY PROCESS CHANGES

Process	Description of Process Change	Air Pollutant	Potential to Emit, ton/yr	10 percent of SER Level ⁴ , ton/yr	Meets Exemption Criterion?	TAP Compliance Status
B	Replacement of dryer associated with stack 7019	Carbon monoxide	7.5	10	Yes	Uncontrolled ambient concentration less than Acceptable Ambient Concentration (IDAPA 58.01.01.210.05). See Table 6-3.
		Nitrogen Oxides	1.4	4	Yes	
		Sulfur Dioxide	1.0	4	Yes	
		Particulate Matter	20.7	2.5	No	
		PM-10	14.8	1.5	No	
		Volatile Organic Compounds	0.2	4	Yes	
		Lead	1.42E-5	0.06	Yes	
		Beryllium	3.4E-7	0.00004	Yes	
		Mercury	7.4E-6	0.01	Yes	
B	Installation of dryer and stacks 613/614, 615/616, and 638	Carbon monoxide	0.0	10	Yes	Not Applicable – no TAP Emissions
		Nitrogen Oxides	0.0	4	Yes	
		Sulfur Dioxide	1.5	4	Yes	
		Particulate Matter	11.2	2.5	No	
		PM-10	9.6	1.5	No	
		Volatile Organic Compounds	0.0	4	Yes	
		Lead	0.0	0.06	Yes	
		Beryllium	0.0	0.00004	Yes	
		Mercury	0.0	0.01	Yes	

TABLE 7-4
APPLICABILITY OF PTC RULE EXEMPTIONS TO FACILITY PROCESS CHANGES

Process	Description of Process Change	Air Pollutant	Potential to Emit, ton/yr	10 percent of SER Level ⁴ , ton/yr	Meets Exemption Criterion?	TAP Compliance Status
B	Installation of materials transport system served by stack 432	Carbon monoxide	0.0	10	Yes	Not Applicable – no TAP Emissions
		Nitrogen Oxides	0.0	4	Yes	
		Sulfur Dioxide	0.0	4	Yes	
		Particulate Matter	0.2	2.5	Yes	
		PM-10	0.2	1.5	Yes	
		Volatile Organic Compounds	0.0	4	Yes	
		Lead	0.0	0.06	Yes	
		Beryllium	0.0	0.00004	Yes	
		Mercury	0.0	0.01	Yes	
B	Installation of dryers and stacks 5034 and 5037	Carbon monoxide	0.0	10	Yes	Not Applicable – no TAP Emissions
		Nitrogen Oxides	0.0	4	Yes	
		Sulfur Dioxide	8.2	4	No	
		Particulate Matter	7.7	2.5	No	
		PM-10	5.7	1.5	No	
		Volatile Organic Compounds	0.0	4	Yes	
		Lead	0.0	0.06	Yes	
		Beryllium	0.0	0.00004	Yes	
		Mercury	0.0	0.01	Yes	

TABLE 7-4
APPLICABILITY OF PTC RULE EXEMPTIONS TO FACILITY PROCESS CHANGES

Process	Description of Process Change	Air Pollutant	Potential to Emit, ton/yr	10 percent of SER Level ⁴ , ton/yr	Meets Exemption Criterion?	TAP Compliance Status
B	Installation of materials transport system served by stack 5000	Carbon monoxide	0.0	10	Yes	Not Applicable – no TAP Emissions
		Nitrogen Oxides	0.0	4	Yes	
		Sulfur Dioxide	0.0	4	Yes	
		Particulate Matter	0.2	2.5	Yes	
		PM-10	0.2	1.5	Yes	
		Volatile Organic Compounds	0.0	4	Yes	
		Lead	0.0	0.06	Yes	
		Beryllium	0.0	0.00004	Yes	
		Mercury	0.0	0.01	Yes	
B	Installation of dryer and stack 4000	Carbon monoxide	0.0	10	Yes	Not Applicable – no TAP Emissions
		Nitrogen Oxides	0.0	4	Yes	
		Sulfur Dioxide	1.1	4	Yes	
		Particulate Matter	8.8	2.5	No	
		PM-10	7.5	1.5	No	
		Volatile Organic Compounds	0.0	4	Yes	
		Lead	0.0	0.06	Yes	
		Beryllium	0.0	0.00004	Yes	
		Mercury	0.0	0.01	Yes	

TABLE 7-4
APPLICABILITY OF PTC RULE EXEMPTIONS TO FACILITY PROCESS CHANGES

Process	Description of Process Change	Air Pollutant	Potential to Emit, ton/yr	10 percent of SER Level ⁴ , ton/yr	Meets Exemption Criterion?	TAP Compliance Status
B	Replacement of dryer and installation of stacks 228 and 234	Carbon monoxide	9.2	10	Yes	Uncontrolled ambient concentration less than Acceptable Ambient Concentration (IDAPA 58.01.01.210.05). See Table 6-3.
		Nitrogen Oxides	1.8	4	Yes	
		Sulfur Dioxide	1.1	4	Yes	
		Particulate Matter	7.2	2.5	No	
		PM-10	6.2	1.5	No	
		Volatile Organic Compounds	0.4	4	Yes	
		Lead	3.5E-5	0.06	Yes	
		Beryllium	8.3E-7	0.00004	Yes	
		Mercury	1.8E-5	0.01	Yes	
B	Installation of materials transport system served by stack 572	Carbon monoxide	0.0	10	Yes	Not Applicable – no TAP Emissions
		Nitrogen Oxides	0.0	4	Yes	
		Sulfur Dioxide	0.0	4	Yes	
		Particulate Matter	0.7	2.5	Yes	
		PM-10	0.52	1.5	Yes	
		Volatile Organic Compounds	0.0	4	Yes	
		Lead	0.0	0.06	Yes	
		Beryllium	0.0	0.00004	Yes	
		Mercury	0.0	0.01	Yes	

8. NEW SOURCE REVIEW PERMIT REQUIREMENTS THAT ARE RECOMMENDED FOR REVISION

There are no existing new source review permit requirements for the Rexburg Facility that BAF recommends be revised.

9. REQUESTED NEW PERMIT CONDITIONS

BAF requests that the conditions described in this section be included in the Tier II permit issued to the Rexburg Facility.

REQUESTED ENFORCEABLE LIMIT ON PLANTWIDE FUEL COMBUSTION

As indicated in the Air Emissions Inventory in Section 5, the Rexburg Facility's current potential emissions of carbon monoxide exceed 250 tons per year, the threshold at which modifications might be subject to Prevention of Significant Deterioration (PSD) permitting rules. Condition 9.2 of the Rexburg Facility Tier I permit notes that as of the issuance of the Tier I permit, the Rexburg Facility has not triggered PSD permitting requirements, and also requires that this Tier II operating permit include proposed enforceable conditions to limit potential carbon monoxide emissions to levels below the 250 ton per year PSD threshold.

PROPOSED LIMITATION ON FUEL COMBUSTION

BAF proposes to limit overall combustion of fuels to assure that potential carbon monoxide emissions are less than 250 tons per year. The proposed limit is contained in the following equation:

$$0.464 * S_{KB} + 0.133 * (G_T - G_B) + 0.042 * G_B \leq 235$$

where: S_{KB} = Steam production by Kipper boiler in last 12 months, Million lbs
 G_T = Total gas combusted at Rexburg Facility in last 12 months, MMscf
 G_B = Total gas combusted in boilerhouse in last 12 months, MMscf

This equation calculates total carbon monoxide emissions at the Rexburg Facility, in tons per year, with each of the coefficients representing the carbon monoxide emission factor for that emission generating activity expressed in tons of CO per unit of fuel combusted. For calculating CO emissions from the Kipper Boiler, the equation uses the emission factor for wood waste combustion. Because CO emissions are higher with wood combustion than with coal combustion, use of the wood combustion emission factor provides a conservatively high estimate of CO emissions.

Compliance will be determined using a rolling 12-month average.

The basis for this equation is as follows:

- **0.464 tons CO/Million lbs of steam generated in Kipper Boiler**

This is derived from the CO emission factor, 0.927 lb CO per 1000 lbs steam

$$\frac{0.927 \text{ lb CO}}{1000 \text{ lbs steam}} * \frac{1000 \text{ lbs steam}}{1 \text{ MMBtu steam}} * \frac{1 \text{ ton CO}}{2000 \text{ lbs CO}}$$

- **0.133 tons CO/MMscf gas combusted outside boiler house**

This is derived from a CO emission factor of 0.26 lbs CO per MMBtu of gas combusted. This emission factor is generally used by BAF to estimate CO emissions from its process burners. This factor is based on six separate measurements of CO emissions from bar burners conducted by BAF.

$$\frac{1020 \text{ MMBtu}}{\text{MMscf gas}} * \frac{0.26 \text{ lb CO}}{\text{MMBtu}} * \frac{1 \text{ ton CO}}{2000 \text{ lb CO}} = 0.133 \frac{\text{tons CO}}{\text{MMscf gas}}$$

- **0.042 tons CO/MMscf gas combusted inside boiler house**

This is derived from the AP-42 emission factor for CO emissions from natural gas combustion in small commercial boilers, 84 lbs CO per MMscf gas.

$$\frac{84 \text{ lb CO}}{\text{MMscf gas}} * \frac{1 \text{ ton CO}}{2000 \text{ lb CO}} = 0.042 \frac{\text{tons CO}}{\text{MMscf gas}}$$

MONITORING, RECORDKEEPING, AND REPORTING PROVISIONS

To make this limit practically enforceable, data must be provided on the quantity of steam generated in the Kipper Boiler, and the amounts of natural gas combusted in the entire Rexburg Facility and the boiler house. The averaging period must also be sufficiently short to ensure that in any 12-month period, carbon monoxide emissions remain below the limit. Practical enforceability will be provided as follows:

1. The amount of steam generated in the Kipper Boiler will be recorded daily.
2. Natural gas consumption in the entire Rexburg Facility will be determined monthly from total natural gas deliveries recorded at the Rexburg Facility gas meter.
3. Natural gas consumption in the boilerhouse will be determined monthly from a gas meter that measures gas deliveries to the boilerhouse.
4. Plantwide carbon monoxide emissions will be calculated monthly, and results of the calculations will be submitted with the semi-annual compliance monitoring report required by the Rexburg Facility's Tier I Air Operating Permit.
5. If the result of the calculation indicates that carbon monoxide emissions exceeded 235 tons in any 12-month calendar period, BAF will report the result as a possible excess emission. BAF may also submit any other credible evidence with the report that would indicate that actual emissions differed from the amount calculated using the emission limitation equation.

6. If the steam totalizing meter for the Kipper Boiler fails to operate, steam generation from the Kipper Boiler will be calculated from fuel usage records. Failure of the steam totalizing meter for the Kipper Boiler will not be considered a failure to collect required monitoring data provided daily fuel consumption records are maintained.
7. If required monitoring data fail to be collected, missing data may be estimated using best professional judgment. The minimum data availability for any required monitoring information is 90 per cent in any 12-month period.

REQUESTED PERMIT CONDITION FOR MODIFYING CERTAIN STACKS

As noted in Section 6, the Full Impact Analysis incorporates the following modifications to existing stacks:

- Stacks 228, 234, 311, 312, 410/411, 613/614, and 615/616 will be reoriented to discharge vertically without impedance. Currently, stacks 228 and 234 discharge horizontally, and stacks 311, 312, 410/411, 613/614, and 615/616 have hats that arrest the upward momentum of the stack exhaust.
- Stacks 4000 and 7019 will be increased 10 feet in height.

The proposed permit conditions below will give force to these requirements.

1. BAF will modify stacks 228, 234, 311, 312, 410/411, 613/614 and 615/616 to discharge vertically.
2. BAF will increase the discharge height of stacks 4000 and 7019 by ten feet.
3. BAF will complete engineering evaluations and designs for stack modifications within 120 days after the issuance date of this permit.
4. BAF will complete the modifications to stacks no later than the conclusion of the first plant maintenance shutdown after completing the engineering evaluations and design, but in no case later than December 31, 2005.

PROPOSED COMPLIANCE SCHEDULE

BAF proposes the following schedule for activities to demonstrate compliance with this air quality standard:

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Activity	Documentation to be Provided	Deadline for Submittal of Documentation
Complete Engineering evaluation and design for modifying stacks.	Dates of next plant maintenance shutdown and date by which all modifications to stacks will be completed	120 days after issuance of Tier II Permit
Complete required modifications to stacks	Notice of completion of stack modifications	30 days after completion of stack modifications,

APPENDIX A

COMPLETENESS DETERMINATION FORMS

COMPLETENESS DETERMINATION CHECKLIST
AND APPLICATION INDEX

Company Name Basic American Foods

Location Rexburg, ID

Project Tier II Air Operating Permit

Reviewer _____ Date _____

The attached forms have been provided as a checklist and application index to ensure all the required information have been included with the air pollution source permit application. These forms shall be submitted along with the application. These checklist/index forms include the following elements of the permit application:

- ☐ Application Forms
- ☐ Source Descriptions
- ☐ Source Flow Diagrams
- ☐ Plot Plans
- ☐ Emission Estimate References and Documentation
- ☐ Excess Emission Documentation
- ☐ Ambient Air Impact Analysis
- ☐ Compliance Certification Plan

Each page of the permit application shall be numbered so that each page can be referenced individually. This will allow these checklist forms to act as the permit application table of contents.

APPLICATION FORMS

[illegible]

YES

NO
SURRENDER

- ☞ Is the application signed and dated?
- ☞ Are all the forms adequately completed?

SOURCE DESCRIPTIONS

<u>SOURCE</u>	<u>PAGE</u>
Process - Plant	Section 4
Process - Boilers	Section 4
Process - A	Section 4
Process - B	Section 4

	<u>YES</u>	<u>NO</u>
Are the existing facilities described?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Are the modifications or new facilities described?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Are all applicable processes, materials, ventilation, and controls described?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Are all equipment referenced by specific ID name or number?	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SOURCE FLOW DIAGRAMS

[illegible]

	YES	NO
Are included?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Shows entire existing facility?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Shows entire future facility?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Shows each process separately (if needed)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Details storage, roads, transfers, and processing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Labeling is adequate (processes and stacks identified, flowrates, and process rates shown)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Flow rates and process rates discussed
in narrative

PLOT PLANS

SOURCE

Plant wide

PAGE

Fog 3-1, 3-2, 3-3.

- ☐ Is included?
- ☐ Shows location coordinates?
- ☐ Shows plant boundaries?
- ☐ Shows neighboring ownership and facilities?
- ☐ Shows topography?
- ☐ Scale shown or distances adequately labeled?
- ☐ Shows all buildings, equipment, storage, and roads?
- ☐ Is adequate for both existing and future or includes both?

YES

NO

✓

1

✓

EMISSION ESTIMATE REFERENCES AND DOCUMENTATION

[illegible]

- | | <u>YES</u> | <u>NO</u> |
|--|-------------|-------------------|
| ☐ All fugitive and point sources listed? | <u>✓</u> | <u> </u> |
| ☐ All pollutants addressed? | <u>✓</u> | <u> </u> |
| ☐ Process documentation and specs included? | <u>✓</u> | <u> </u> |
| ☐ Control equipment documentation and specs included? | <u> </u> | <u>✓</u> X |
| ☐ Emission factors documented and referenced? | <u>✓</u> | <u> </u> |
| ☐ Calculations and assumptions shown? | <u>✓</u> | <u> </u> |
| ☐ Source tests referenced (test includes processing and control device test conditions)? | <u>✓</u> | <u> </u> |

Control equipment specs have been provided with earlier PTC applications. No new control equipment included in this application.

EXCESS EMISSION DOCUMENTATION

SOURCE

Record Keeping Requirements

PAGE

Sec 4

- ☞ All three types of excess emissions (startup, shutdown, and scheduled maintenance) covered for each source?
- ☞ Calculations and documentation included?
- ☞ Expected frequencies of excess emissions noted?
- ☞ Justification for amounts and frequencies of excess emissions?
- ☞ Procedures for minimizing excess emissions covered?

YES

NO



NA

AMBIENT AIR IMPACT ANALYSIS

PROJECT

Existing ambient air quality discussion including attainment status and classification of areas which may be significantly impacted.

Discussion of dispersion model use and assumptions.

Dispersion model input.

Dispersion model output.

Discussion of ambient impacts for each pollutant.

Discussion of how excessive impacts will be controlled or avoided for sources and pollutants with the potential for these.

PAGE

*Full Impact Analysis Report
(separate cover)*

11

12

13

Section 6.

Compliance Plan Proposal

Sec. 10

COMPLIANCE CERTIFICATION PLAN

[illegible]

☛ Monitoring, recordkeeping, and reporting discussed?

👉 Stack testing methods thoroughly documented?

Discussion and documentation of process control mechanisms used to meet emission limits?

☞ Quality assurance/quality control discussed?

13 Monitoring equipment specifications and documentation included?

YES

NO

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Source: *Author's calculations*.

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Journal of Management Inquiry 22(1)

1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 26

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APPENDIX B

EMISSIONS UNIT DATA TABLES (IDEQ AIR QUALITY OPERATING PERMIT APPLICATION FORMS IN SPREADSHEET FORMAT)

SECTION 2: FUEL BURNING

Stack Description	Kipper Boiler	Boiler 1	Boiler 2	Heaters
DEQ Use Only				
DEQ Plant ID Code				
DEQ Process Code				
DEQ Stack ID Code				
DEQ Building Code				
Primary SCC				
Secondary SCC				
DEQ Segment Code				

Part A: General Information

Process Code or Description	Boiler	Boiler	Boiler	Plant
Stack Description	Kipper Boiler	Boiler 1	Boiler 2	Heaters
Building Description	See Plot Plan	See Plot Plan	See Plot Plan	-
Manufacturer	Kipper & Sons	Springfield	Murray	various
Model		52	-	-
Date Installed	1981	1975	1982	various
Last Date Modified	1981			

Rated Capacity

Million BTU/hr	90	52	35	30.8
Burner Type	1	11	11	11
Percent Used for Process	100	100	100	0
Percent Used for Space Heat	0	0	0	100

Fuel Data

	Wood Only	Wood:coal	Primary Fuel	Primary Fuel	Primary Fuel
Fuel Code	08	08 & 10 (50% mix)	01	01	01
Heat Content	9000 Btu/lb BDS	9,250 Btu/lb	1020 Btu/scf	1020 Btu/scf	1020 Btu/scf
Maximum Hourly Combustion Rate	10,000	9,730	50,980	34,314	30,196
Normal Annual Combustion Rate	87,600,000	85,232,432	446,588,235	300,588,235	132,258,824

Part B: Operating Data

Percent Fuel Consumption:	Dec-Feb	25	25	25	40
	Mar-May	25	25	25	25
	Jun-Aug	25	25	25	10
	Sep-Nov	25	25	25	25
Operating Schedule:	Hours/day	24	24	24	24
	Days/week	7	7	7	7
	Weeks/year	51	51	51	51
	Hours/year	8760	8760	8760	8760

Pollution Control Equipment

Type	Multiclone	wet scrubber	None	None	None
Type Code	077	002	000	000	000

Ventilation and Building/Area Data

Enclosed (Y/N)	Y	Y	Y	Y
Hood type				
Minimum flow (acfm)				
Percent Capture Efficiency				
Building height (ft)	66	66	66	66
Building /area length (ft)	100	100	100	100
Building/area width (ft)	70	70	70	70
Ground elevation (ft)	4863	4863	4863	4863
UTM x coordinate (km)	437	437	437	437
UTM y coordinate (km)	4854	4854	4854	4854
Stack type	02	02	02	02
Stack height from ground level (ft)	66	36	36	30
Stack exit diameter (ft) (modeled cond)	4.00	3.00	3.00	0.00
Stack exit gas flowrate (acfm) (modeled)	26,238	19,972	13,154	0
Stack exit temperature (F)	129	500	500	70

SECTION 2: FUEL BURNING

Stack Description	Kipper Boiler	Boiler 1	Boiler 2	Heaters
Criteria Air Pollutant Emissions				
PM: Emission Factor (lbs/MM Btu)	0.184	0.007	0.007	0.007
Emission Factor (lbs/hour)	16.59	0.39	0.26	0.23
Percent Control Efficiency	included in emission factor			
Estimated or Measured Emission	16.59	0.39	0.26	0.23
Allowable emissions (lbs/hr)				
Allowable emissions (tons/yr)				
Reference	Appendix C	Appendix C	Appendix C	Appendix C
PM10: Emission Factor (lbs/MM Btu)	0.181	0.007	0.007	0.007
Emission Factor (lbs/hour)	16.25	0.39	0.26	0.23
Percent Control Efficiency				
Estimated or Measured Emission	16.25	0.39	0.26	0.23
Allowable emissions (lbs/hr)				
Allowable emissions (tons/yr)				
Reference	Appendix C	Appendix C	Appendix C	Appendix C
SO2: Emission Factor (lbs/MM Btu)	0.543	0.002	0.002	0.002
Emission Factor (lbs/hour)	48.89	0.12	0.08	0.07
Percent Control Efficiency				
Estimated or Measured Emission	48.89	0.12	0.08	0.07
Allowable emissions (lbs/hr)				
Allowable emissions (tons/yr)				
Reference	Appendix C	Appendix C	Appendix C	Appendix C
CO: Emission Factor (lbs/MM Btu)	0.618	0.082	0.082	0.082
Emission Factor (lbs/hour)	55.62	4.28	2.88	2.54
Percent Control Efficiency				
Estimated or Measured Emission	55.62	4.28	2.88	2.54
Allowable emissions (lbs/hr)				
Allowable emissions (tons/yr)				
Reference	Appendix C	Appendix C	Appendix C	Appendix C
NOx: Emission Factor (lbs/MM Btu)	0.304	0.098	0.098	0.098
Emission Factor (lbs/hour)	27.38	5.10	3.43	3.02
Percent Control Efficiency				
Estimated or Measured Emission	27.38	5.10	3.43	3.02
Allowable emissions (lbs/hr)				
Allowable emissions (tons/yr)				
Reference	Appendix C	Appendix C	Appendix C	Appendix C
VOC Emission Factor (lbs/MM Btu)	0.033	0.005	0.005	0.005
Emission Factor (lbs/hour)	2.94	0.28	0.19	0.17
Percent Control Efficiency				
Estimated or Measured Emission	2.94	0.28	0.19	0.17
Allowable emissions (lbs/hr)				
Allowable emissions (tons/yr)				
Reference	Appendix C	Appendix C	Appendix C	Appendix C
Lead Emission Factor (lbs/MM Btu)	4.80E-05	4.90E-07	4.90E-07	4.90E-07
Emission Factor (lbs/hour)	4.32E-03	2.55E-05	1.72E-05	1.51E-05
Percent Control Efficiency				
Estimated or Measured Emission	4.32E-03	2.55E-05	1.72E-05	1.51E-05
Reference	Appendix C	Appendix C	Appendix C	Appendix C

SECTION 2: FUEL BURNING

SECTION 2, CONT. HAP EMISSIONS - KIPPER BOILER

Wood Waste Emission Factors (AP-42, Chapter 1.6)		Emission Rate, lb/hr		Coal Emissions (AP-42, Chapter 1.1)		Emission Rate, lb/hr 50% coal firing
Constituent	lb/MMBtu	100% wood firing	50% wood firing	Constituent	lb/MMBtu	
Acetaldehyde	8.30E-04	7.47E-02	3.74E-02	2,3,7,8-TCDD	7.53E-13	3.39E-11
Acetophenone	3.20E-09	2.88E-07	1.44E-07	Total PCDF	5.74E-11	2.58E-09
Acrolein	4.00E-03	3.60E-01	1.80E-01	POM (sum of POM constituents list)	1.09E-06	4.92E-05
Benzene	4.20E-03	3.78E-01	1.89E-01	5-Methyl chrysene		
Bis(2-ethylhexyl)phthalate (DEHP)	4.70E-08	4.23E-06	2.12E-06	Acenaphthene		
Methyl bromide (bromomethane)	1.50E-05	1.35E-03	6.75E-04	Acenaphthylene		
2-Butanone (MEK)	5.40E-06	4.86E-04	2.43E-04	Anthracene		
Carbon tetrachloride	4.50E-05	4.05E-03	2.03E-03	Benzo(a)anthracene		
Chlorine	7.90E-04	7.11E-02	3.56E-02	Benzo(a)pyrene		
Chlorobenzene	3.30E-05	2.97E-03	1.49E-03	Benzo(b,j,k)fluoranthene		
Chloroform	2.80E-05	2.52E-03	1.26E-03	Benzo(g,h,i)perylene		
Methyl chloride (chloromethane)	2.30E-05	2.07E-03	1.04E-03	Biphenyl		
Ethylene dichloride (dichloroethane)	2.90E-05	2.61E-03	1.31E-03	Chrysene		
Dichloromethane	2.90E-04	2.61E-02	1.31E-02	Fluoranthene		
1,2-Dichloropropane	3.30E-05	2.97E-03	1.49E-03	Fluorene		
2,4-Dinitrophenol	1.80E-07	1.62E-05	8.10E-06	Indeno(1,2,3-cd)pyrene		
Ethyl benzene	3.10E-05	2.79E-03	1.40E-03	Naphthalene		
Formaldehyde	4.40E-03	3.96E-01	1.98E-01	Phenanthrene		
Total PCDF	1.87E-09	1.68E-07	8.41E-08	Pyrene		
Heptachlorodibenzo-p-furans				Acetaldehyde	3.00E-05	1.35E-03
Hexachlorodibenzo-p-furans				Acetophenone	7.89E-07	3.55E-05
Octachlorodibenzo-p-furans				Acrolein	1.53E-05	6.87E-04
Pentachlorodibenzo-p-furans				Benzene	6.84E-05	3.08E-03
2,3,7,8-Tetrachlorodibenzo-p-furans				Benzyl chloride	3.68E-05	1.66E-03
Tetrachlorodibenzo-p-furans				Bis(2-ethylhexyl)phthalate (DEHP)	3.84E-06	1.73E-04
Hydrogen chloride	1.90E-02	1.71E+00	8.55E-01	Bromoform	2.05E-06	9.24E-05
Naphthalene	9.70E-05	8.73E-03	4.37E-03	Carbon disulfide	6.84E-06	3.08E-04
4-Nitrophenol	1.10E-07	9.90E-06	4.95E-06	2-Chloroacetophenone	3.68E-07	1.66E-05
Pentachlorophenol	5.10E-08	4.59E-06	2.30E-06	Chlorobenzene	1.16E-06	5.21E-05
Phenol	5.10E-05	4.59E-03	2.30E-03	Chloroform	3.11E-06	1.40E-04
Styrene	1.90E-03	1.71E-01	8.55E-02	Cumene	2.79E-07	1.26E-05
2,3,7,8-TCDD	8.60E-12	7.74E-10	3.87E-10	Cyanide	1.32E-04	5.92E-03
Tetrachloroethene	3.80E-05	3.42E-03	1.71E-03	2,4-Dinitrotoluene	1.47E-08	6.63E-07
Toluene	9.20E-04	8.28E-02	4.14E-02	Dimethyl sulfate	2.53E-06	1.14E-04
1,1,1-Trichloroethane	3.10E-05	2.79E-03	1.40E-03	Ethyl benzene	4.95E-06	2.23E-04
Trichloroethene	3.00E-05	2.70E-03	1.35E-03	Ethyl chloride	2.21E-06	9.95E-05
2,4,6-Trichlorophenol	2.20E-08	1.98E-06	9.90E-07	Ethylene dichloride (dichloroethane)	2.11E-06	9.47E-05
Vinyl Chloride	1.80E-05	1.62E-03	8.10E-04	Ethylene dibromide	6.32E-08	2.84E-06
Xylenes	2.50E-05	2.25E-03	1.13E-03	Formaldehyde	1.26E-05	5.68E-04
POM (sum of POM constituents)	2.78E-05	2.50E-03	1.25E-03	Hexane	3.53E-06	1.59E-04
Antimony	7.90E-06	7.11E-04	3.56E-04	Antimony	9.47E-07	4.26E-05
Arsenic	2.20E-05	1.98E-03	9.90E-04	Arsenic	2.16E-05	9.71E-04
Beryllium	1.10E-06	9.90E-05	4.95E-05	Beryllium	1.11E-06	4.97E-05
Cadmium	4.10E-06	3.69E-04	1.85E-04	Cadmium	2.68E-06	1.21E-04
Chromium, total	2.10E-05	1.89E-03	9.45E-04	Chromium, total	1.37E-05	6.16E-04
Chromium, hexavalent	3.50E-06	3.15E-04	1.58E-04	Cobalt	5.26E-06	2.37E-04
Cobalt	6.50E-06	5.85E-04	2.93E-04	Lead	2.21E-05	9.95E-04
Lead	4.80E-05	4.32E-03	2.16E-03	Manganese	2.58E-05	1.16E-03
Manganese	1.60E-03	1.44E-01	7.20E-02	Mercury	4.37E-06	1.97E-04
Mercury	3.50E-06	3.15E-04	1.58E-04	Nickel	1.47E-05	6.63E-04
Nickel	3.30E-05	2.97E-03	1.49E-03	Selenium	6.84E-05	3.08E-03
Selenium	2.80E-06	2.52E-04	1.26E-04		7.17E-02	3.23E+00
	3.86E-02	3.48E+00	1.74E+00			

SECTION 2: FUEL BURNING

SECTION 2, CONT. HAP EMISSIONS, BOILER 1, BOILER 2, AND PLANT HEATERS

Natural Gas Emission Factors (AP-42, Chapter 1.4)			Emission Rate, lb/hr		
Constituent		lb/MMBtu	Boiler 1	Boiler 2	Heaters
Lead		4.90E-07	2.55E-05	1.72E-05	1.51E-05
POM (sum of POM constituents listed below)		8.65E-08	4.50E-06	3.03E-06	2.66E-06
2-Methylnaphthalene	2.40E-05				
3-Methylchloranthrene	1.80E-06				
7,12-Dimethylbenz(a)anthracene	1.60E-05				
Acenaphthene	1.80E-06				
Acenaphthylene	1.80E-06				
Anthracene	2.40E-06				
Benz(a)anthracene	1.80E-06				
Benzo(a)pyrene	1.20E-06				
Benzo(b)fluoranthene	1.80E-06				
Benzo(g,h,i)perylene	1.20E-06				
Benzo(k)fluoranthene	1.80E-06				
Chrysene	1.80E-06				
Dibenzo(a,h)anthracene	1.20E-06				
Fluoranthene	3.00E-06				
Fluorene	2.80E-06				
Indeno(1,2,3-cd)pyrene	1.80E-06				
Phenanthrene	1.70E-05				
Pyrene	5.00E-06				
Benzene		2.06E-06	1.07E-04	7.21E-05	6.34E-05
Dichlorobenzene		1.18E-06	6.12E-05	4.12E-05	3.62E-05
Formaldehyde		7.35E-05	3.82E-03	2.57E-03	2.26E-03
Hexane		1.76E-03	9.18E-02	6.18E-02	5.44E-02
Naphthalene		5.98E-07	3.11E-05	2.09E-05	1.84E-05
Toluene		3.33E-06	1.73E-04	1.17E-04	1.03E-04
Arsenic		1.96E-07	1.02E-05	6.86E-06	6.04E-06
Beryllium		1.18E-08	6.12E-07	4.12E-07	3.62E-07
Cadmium		1.08E-06	5.61E-05	3.77E-05	3.32E-05
Chromium		1.37E-06	7.14E-05	4.80E-05	4.23E-05
Cobalt		8.24E-08	4.28E-06	2.88E-06	2.54E-06
Manganese		3.73E-07	1.94E-05	1.30E-05	1.30E-05
Mercury		2.55E-07	1.33E-05	8.92E-06	8.92E-06
Nickel		2.06E-06	1.07E-04	7.21E-05	7.21E-05
Selenium		2.35E-08	1.22E-06	8.24E-07	8.24E-07
Total HAP Emission Factor:		1.85E-03	9.63E-02	6.48E-02	6.48E-02

Pages 5/30 through and including 28/30
were marked "confidential" and were
returned to BAF in May, 2006.

SECTION 7: SOLID MATERIAL TRANSPORT, HANDLING, AND STORAGE

DEQ Use Only

DEQ Plant ID Code						
DEQ Process Code						
DEQ Stack ID Code						
DEQ Building Code						
Primary SCC						
Secondary SCC						
DEQ Segment Code						

PART A: General Information

Process Code or Description	Process B	Process B	Process B	Process B	#N/A	Process B
Stack Description	8	5001	5000	432	322	572
Building Description	See Plot Plan	See Plot Plan	See Plot Plan	See Plot Plan	See Plot Plan	See Plot Plan
Date Installed	1958	1961	1961	1961	1961	1958
Last Date Modified						
Material Description	dehydrated food	dehydrated food	dehydrated food	dehydrated food	dehydrated food	dehydrated food

Material Transfer Rates

Maximum Hourly Transfer Rate (1000 lbs/hour)	30.40	30.40	30.40	0	#N/A	0
Normal Hourly Transfer Rate (1000 lbs/hour)	30.40	30.40	30.40	0	#N/A	0
Normal Annual Transfer Rate (1000 lbs/year)	53,261	53,261	53,261	-	#N/A	-
Unit of Measure						

Belt Conveyor/Vehicle Transfer

Pneumatic Conveyor Transfers

Moisture content, wt %	8	8	8	8	8	8
Primary Separator Type	cyclone	cyclone	cyclone	cyclone	cyclone	cyclone
Separator Efficiency	>99%	>99%	>99%	>99%	>99%	>99%

Material Storage Data

Storage Type:	Enclosed tank. No stack	Enclosed tank. No stack	Enclosed tank. No stack	Enclosed tank. No stack	Enclosed tank. No stack	Enclosed tank. No stack
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Material Data

HAP Description	None	None	None	None	None	None
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PART B: Operating Data

Percent Fuel Consumption: Dec-Feb						
Mar-May						
Jun-Aug						
Sep-Nov						
Operating Schedule: Hours/day	24	24	24	24	24	24
Days/week	7	7	7	7	7	7
Weeks/year	52	52	52	52	52	52

Pollution Control Equipment

Type	None	None	None	None	None	None
Type Code	0000	0001	0002	0003	0004	0005

Ventilation and Building/Area Data

Enclosed (Y/N)	Y	Y	Y	Y	Y	Y
Hood type						
Minimum flow (acfm)						
Percent Capture Efficiency						
Building height (ft)	70	66	66	66	66	66
Building /area length (ft)	500	450	450	450	450	450
Building/area width (ft)	220	350	350	350	350	350
Ground elevation (ft)	4863	4622	4622	4622	4622	4622
UTM x coordinate (km)	437	437	437	437	437	437
UTM y coordinate (km)	4854	4854	4854	4854	4854	4854
Stack type	04	02	04	04	04	02
Stack height from ground level (ft)	22	68	27	23	10	16
Stack exit diameter (ft) (as modeled)	1.33	0.42	0.72	0.50	0.50	0.54
Stack exit gas flowrate (acfm) (as modeled)	0	0	0	0	0	0
Stack exit temperature (F)	81	76	80	80	180	90

Air Pollutant Emissions

PM: Emission Factor, lb/1000 lbs material transferred	0.002	0.016	0.002	0.002	#N/A	0.150
Percent Control Efficiency						
Estimated Emissions (lbs/hr)	0.05	0.49	0.05	0.002	#N/A	0.150
Allowable emissions (lbs/hr)						
Allowable emissions (tons/yr)						
Reference	Appendix C	Appendix C	Appendix C	Appendix C	Appendix C	Appendix C
PM10: Emission Factor, lb/1000 lbs material transferred	0.002	0.008	0.002			
Percent Control Efficiency						
Estimated Emissions (lbs/hr)	0.05	0.24	0.05	0.002	#N/A	0.038
Allowable emissions (lbs/hr)						
Allowable emissions (tons/yr)						
Reference	Appendix C	Appendix C	Appendix C	Appendix C	Appendix C	Appendix C

May 2003